



**TOWNSEND<sup>®</sup>**  
GROUP

an Aon company

Real Estate Portfolio

# Performance Measurement Report

THIRD QUARTER 2019



**SCERS**

SACRAMENTO COUNTY  
EMPLOYEES' RETIREMENT SYSTEM

## SCERS Real Estate Portfolio Overview

- In July 2017, Sacramento County Employees' Retirement System ("SCERS") Board adopted a series of changes to its Real Estate Investment Policy Statement. Real Estate, housed within the Real Return asset category, now includes Core, Non-Core and Non-U.S. Private Real Estate; though there is no current exposure to Real Estate Investment Trusts ("REITs"), REITs are included within the Equity allocation. This report will focus on the SCERS Private Real Estate portfolio.
- SCERS targets 7.0% to Real Estate with an allowable range of 5.0% to 9.0%. As of the end of the Third Quarter, 2019 (the "Quarter"), the Real Estate Portfolio was below the allowable range at 8.8%. Core Real Estate currently makes up 76.4% of the portfolio, with Non-Core Real Estate making up the remaining 23.6%. Townsend and Staff are evaluating portfolio rebalancing options to reduce Real Estate exposure.

### SCERS' Real Estate Portfolio Construction:

	Minimum	Target	Maximum
Total Real Estate Program	5.0%	<b>7.0%</b>	9.0%
	Minimum	Target	Maximum
Core Real Estate	50%	<b>65%</b>	80%
Non-Core Real Estate	20%	<b>35%</b>	50%
Non-U.S. Real Estate	0%	<b>0%</b>	30%

- Performance of the Core Portfolio is evaluated over rolling 10-year time periods relative to the NCREIF Fund Index of Open-End Diversified Core Equity funds ("NFI-ODCE"), net of fees. The NFI-ODCE represents the aggregation of twenty-four Core open-end commingled funds invested across the United States.
- In July of 2017, Staff and Townsend recommended revising the Real Estate IPS to reflect transition away from IMAs, including removal of the Core vehicle constraints of 0-60% (30% target) for funds and 40-100% (70% target) for IMAs, which was subsequently approved by the Board.
- In 2018, SCERS' IMA Program transitioned to a commingled fund manager. Following an extensive bidding, selection and structuring process, Staff and Townsend selected Clarion's Lion Properties Fund as the recipient for the IMA Portfolio. Given the size of the IMA Portfolio, SCERS reduced concentration risk by allocating funds to an additional manager, Brookfield's Premier Property Partners, in order to achieve greater diversification within the Core Portfolio. SCERS' investment in Brookfield Premier Property Fund was funded October 1<sup>st</sup> 2018.
- The loan-to-value ratio of the Private Real Estate Portfolio was 35.0% at the end of the Third Quarter of 2019. The loan-to-value ratio of the Core Portfolio was 30.9%, below the 40.0% leverage constraint for Core as approved by the Board. As a point of reference, the loan-to-value ratio of the NFI-ODCE was 21.7% as of the Third Quarter. The Non-Core Portfolio reported a loan-to-value ratio of 45.5%.

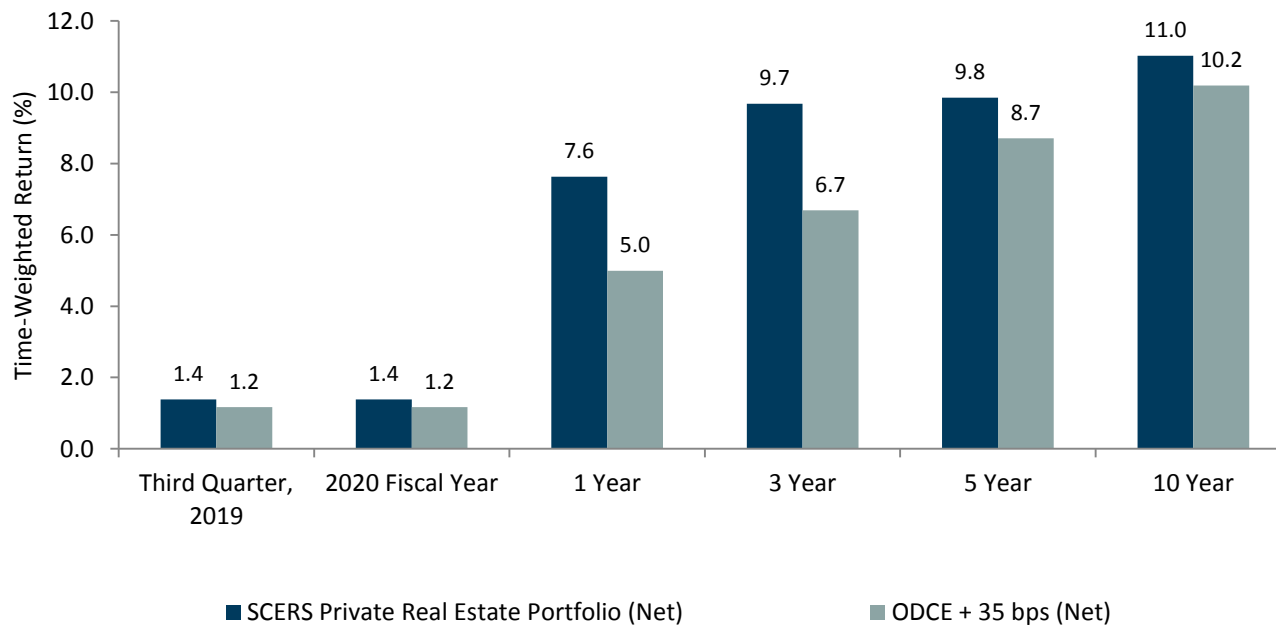
## Portfolio Funding Status

- The following slides provide a review of key information of the SCERS Real Estate Portfolio (the “Portfolio”) through September 30, 2019.
- A detailed performance report is also provided in **Exhibit A**.
- Figures exclude commitments / redemptions / dispositions approved subsequent to Quarter-end.

<b>SCERS Portfolio Snapshot</b> <i>As of September 30, 2019</i>	<b>Market Value</b> (in millions of dollars)*	<b>% of SCERS Plan</b>
<b>SCERS Total Plan Assets</b>	<b>9,976</b>	<b>100.0%</b>
<b>Private Portfolio Target</b>	<b>698</b>	<b>7.0%</b>
<b>Private Portfolio Permissible Range</b>		<b>5.0-9.0%</b>
<b>Private Real Estate</b>		
Core Portfolio	672	6.7%
Non-Core Portfolio	207	2.1%
<b>Total SCERS Private Real Estate Market Value</b>	<b>879</b>	<b>8.8%</b>
<b>Total SCERS Private Real Estate Unfunded Commitments</b>	<b>171</b>	<b>1.7%</b>

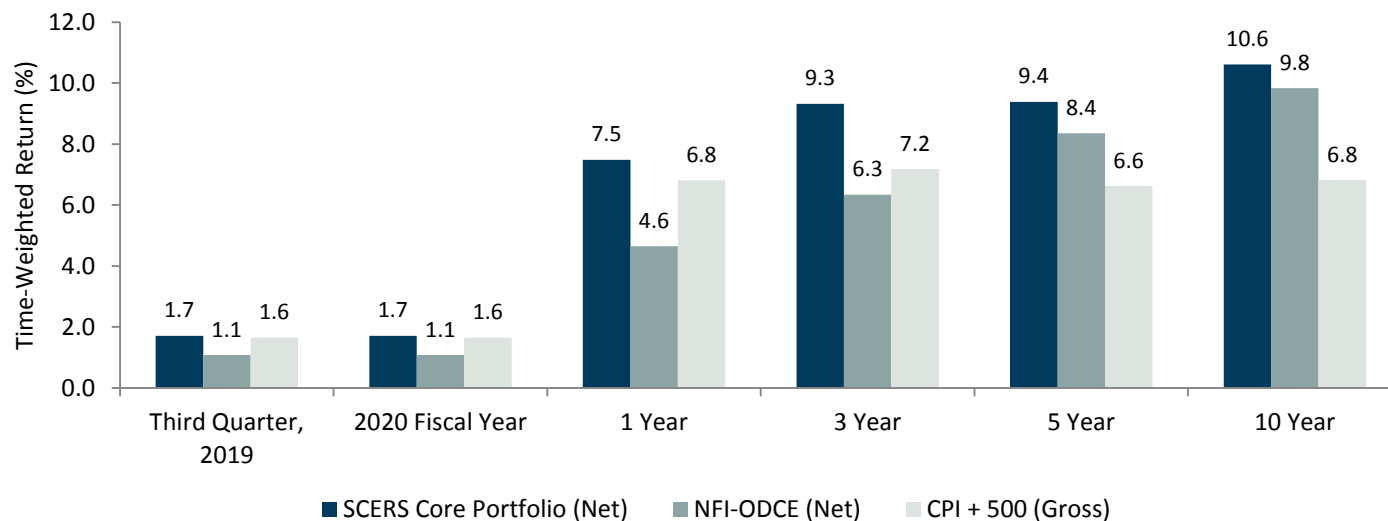
\* Figures may not add due to rounding.

## Private Real Estate Portfolio Performance



- The SCERS Private Real Estate Portfolio includes: (1) Core Real Estate and (2) Non-Core Real Estate.
- The SCERS Private Real Estate Benchmark is comprised of the NFI-ODCE (Core Benchmark, net) (65%) and the NFI-ODCE + 100bps (Non-Core Benchmark, net) (35%), resulting in an NFI-ODCE + 35bps (net) portfolio benchmark.
- On a net of fee basis, the SCERS Total Real Estate Portfolio outperformed the blended benchmark for all time periods.

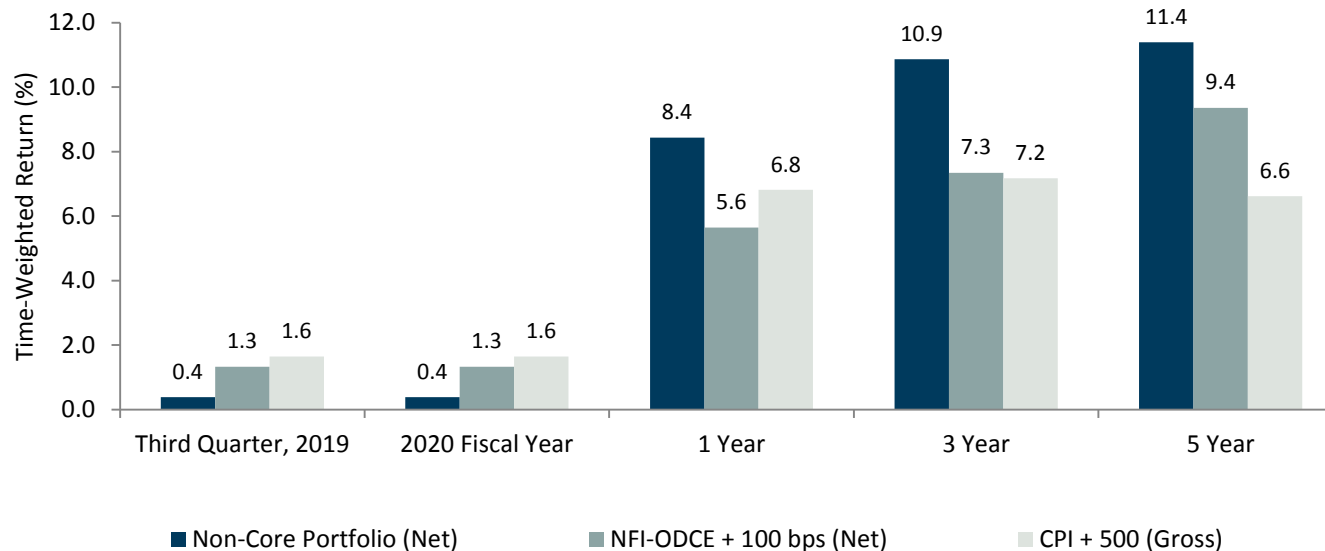
## Core Portfolio Performance



- The SCERS Core Portfolio consists of nine open-end Core Commingled funds. The Core Commingled Fund exposure includes Morgan Stanley’s Prime Property Fund, MetLife Core Property Fund, Jamestown Premier Property Fund, Principal U.S. Property Account, Prologis Targeted U.S. Logistics Fund, Prologis European Logistics Fund, Townsend Real Estate Fund, Brookfield Premier Real Estate Partners, and Clarion’s Lion Properties Fund.
- Performance of the Core Portfolio is evaluated relative to the NCREIF Fund Index of Open-End Diversified Core Equity funds (“NFI-ODCE”), net of fees. In aggregate, the Core Portfolio outperforms the NFI-ODCE, net of fees, over all displayed time periods.
- During the Quarter, Prologis Targeted U.S. Logistics Fund was the strongest absolute performer followed by the Townsend Real Estate Fund and Brookfield Premier Real Estate Partners. On the other hand, Lion Properties Fund was the largest contributor on a dollar-basis.
- The Core Portfolio has recently benefited from an overweight to industrial exposure, with Prologis U.S. Logistics Fund generating one-year net returns of 15.8%, greatly outperforming the benchmark. Prologis European Logistics Fund has generated strong local currency returns (12.5% over the one-year period), but currency fluctuation resulted in a one-year USD net return of 5.9%.
- The SCERS Core Portfolio performed above the CPI + 500 bps (the SCERS Real Asset benchmark) over all time periods.

\*EX-US funds produced the following 3Q19 net returns in local currency: Prologis European Logistics Fund (Euro) 2.8%

## Non-Core Portfolio Performance

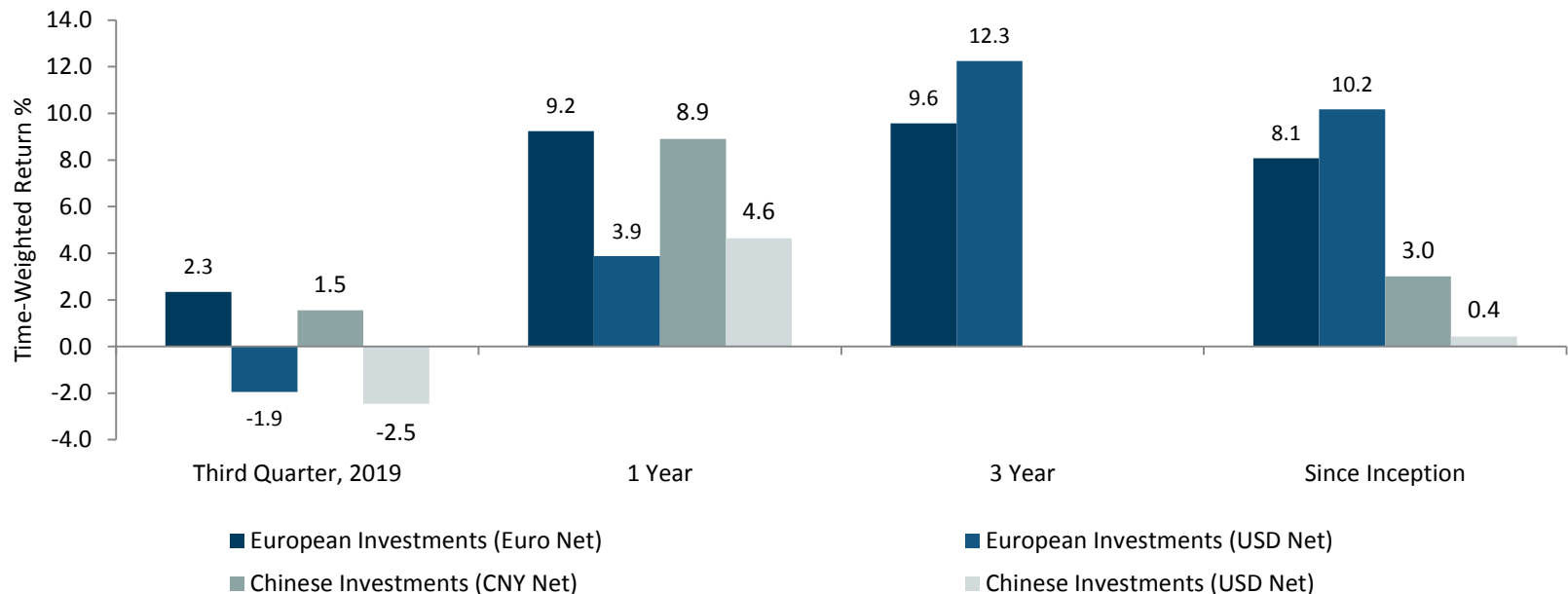


- The SCERS Non-Core Portfolio includes both Value Add and Opportunistic Real Estate strategies, which are defined in the Glossary of Terms. As displayed above, the SCERS Non-Core Portfolio outperformed the NFI-ODCE + 100 basis points over all time periods, except for the trailing Quarter and fiscal year.
- Underperformance of the Non-Core Portfolio over the third Quarter is driven by the poor performance of the Opportunistic investments. This was due to the currency exchange effect led by Carlyle China Project Rome Co-Investment and Carlyle China Realty.
- On the other hand, Value Added Investments outperformed the benchmark by 16 bps, driven by the positive performance of Hammes Partners II, which generated a 22.6% net return.
- Over the trailing quarter, NREP Nordic Strategies Fund III returns were affected by the J-curve effect and currency fluctuations.

*\*EX-US funds produced the following 3Q19 net returns in local currency: Carlyle China Realty Fund (Chinese Yuan) 1.25%, Carlyle's Project Rome (Chinese Yuan) 1.6%, DRC European Real Estate Debt Fund II (Pound Sterling) 0.0%, ECE European Prime Shopping Center Fund II (Euro) 4.2%, NREP Nordic Strategies Fund (Euro) 1.5%, NREP Nordic Strategies Fund II (Euro) 1.7% and NREP Nordic Strategies Fund III (Euro) -4.2%*



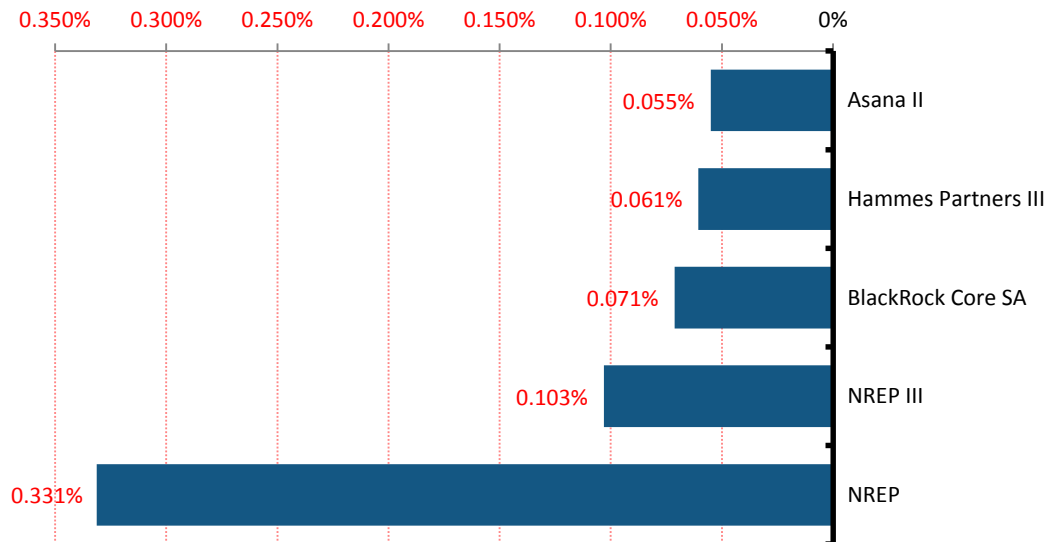
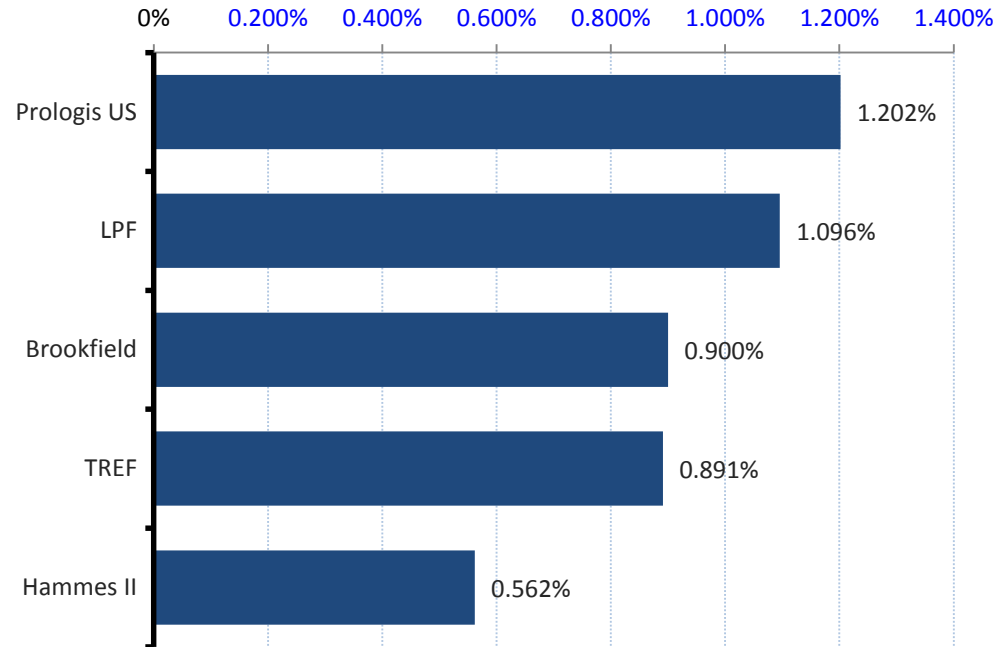
## Ex-US Portfolio Performance



- Approximately 20.8% of the SCERS Portfolio is comprised of Ex-US investment. SCERS does not currently hedge its foreign currency exposures and pays liabilities in US Dollars. As such, FX movement will impact performance for Ex-US investments. The chart above isolates European and Asian investments and displays performance both before and after currency conversion.
- Currency movement has negatively impacted foreign investments over recent time periods. In local currency, both European and Chinese investments have been positive and accretive to SCERS' portfolio. Currency impacts on performance tend to be cyclical in nature.
- The SCERS Euro Denominated Composite includes: ECE European Prime Shopping Center Fund II (Euro) 4.2%, NREP Nordic Strategies Fund (Euro) 1.5%, NREP Nordic Strategies Fund II (Euro) 1.7%, NREP Nordic Strategies Fund III (Euro) -4.2%, and Prologis European Logistics Fund (PELF) 2.8%.
  - Since Inception period begins 1Q15.
  - For the purposes of this composite, DRC has been excluded since it is a Pound denominated fund.
- The SCERS Chinese Yuan Composite includes: Carlyle China Realty Fund (Chinese Yuan) 1.3% and Carlyle's Project Rome (Chinese Yuan) 1.6%.
  - Since Inception period begins 3Q17.
  - SCERS' Carlyle investments are USD denominated at the fund level, but property values are exposed to currency translation.

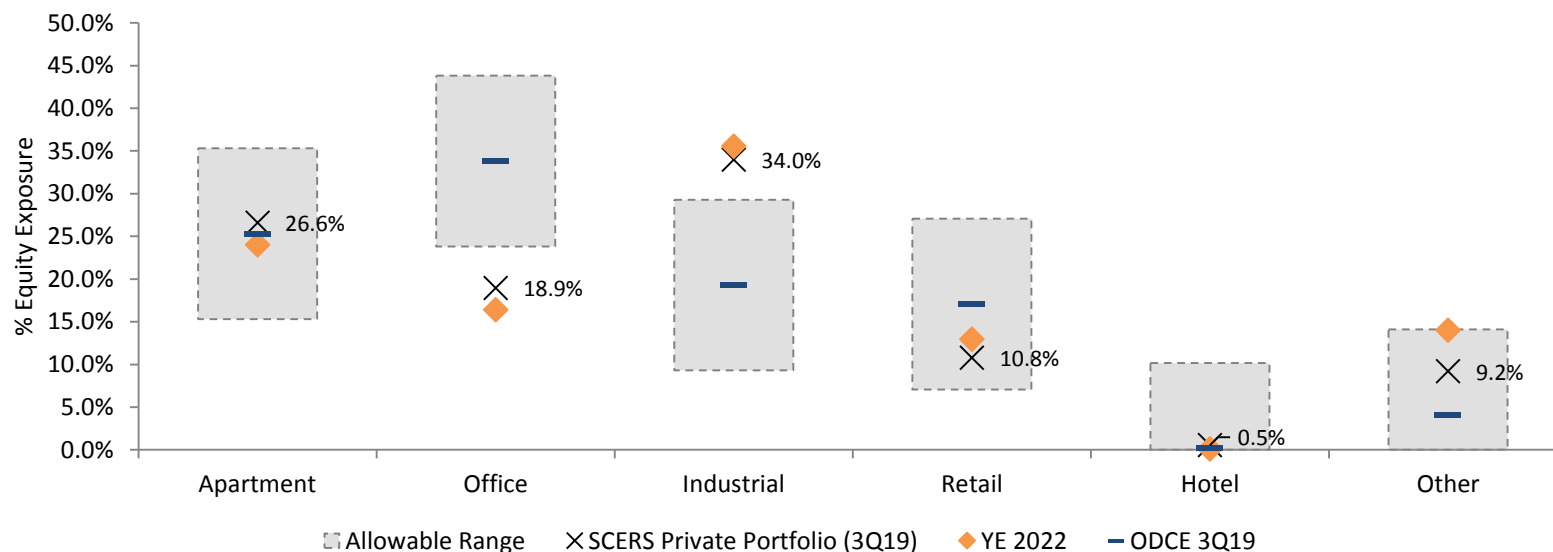
# Performance Attribution

- Over the trailing year, performance was driven primarily by Core OECFs, with Prologis Targeted U.S. Logistics Fund contributing the greatest proportion of overall returns
  - Lion Properties Fund, Brookfield Premier Real Estate Partners and the Townsend Real Estate Fund also contributed significantly to overall portfolio performance.
- NREP Nordic Strategies Fund I negative performance was affected by the accrued incentive fees that had previously not been reported on.
- During the trailing year, BlackRock Core Separate Account was written down, resulting in negative performance over the period.





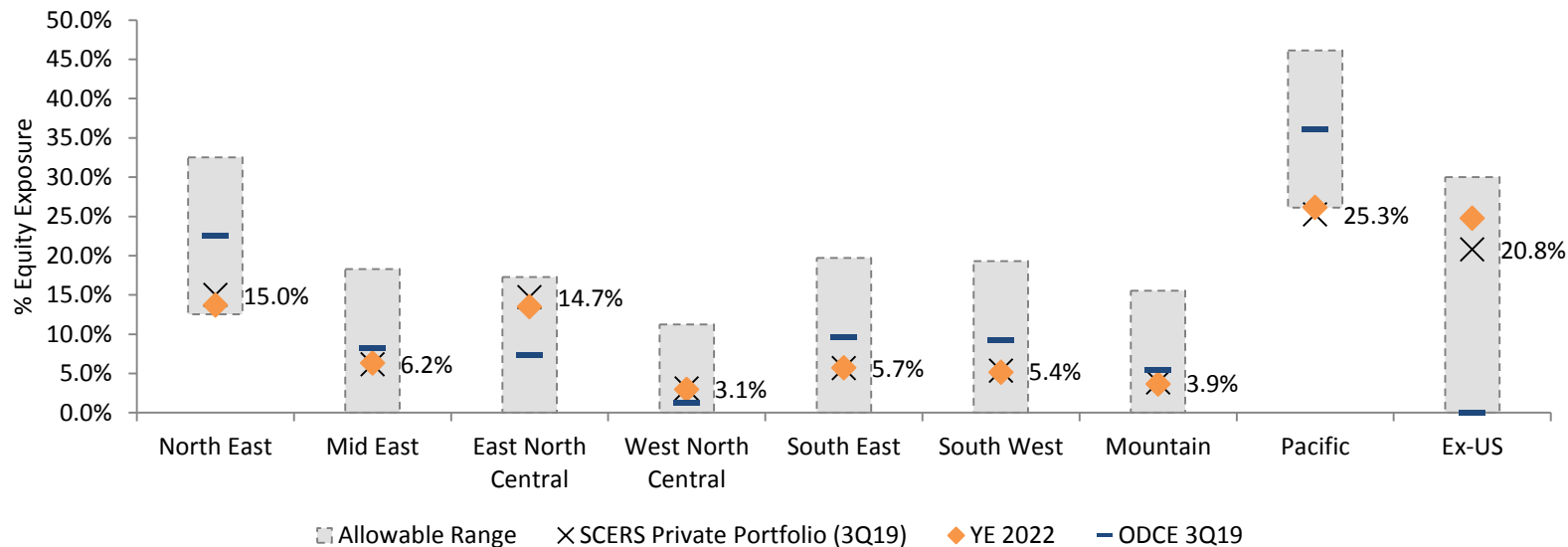
## Real Estate Private Portfolio Diversification – Property Type



- The diversification of the Private Portfolio is compared to the diversification of the NFI-ODCE, with a permissible deviation of  $\pm 10.0\%$  for each property type. The Real Estate Policy also allows for temporary deviations in order to provide SCERS with the flexibility required to overweight or underweight property types during certain parts of the market cycle.
- As of the Third Quarter, the Private Portfolio was in compliance across all property types, with the exception of office and industrial. Given a majority of industrial exposure is within open-ended vehicles, Townsend and Staff will continue to monitor the property type fundamentals for opportunities to tactically reduce exposure if secular growth trends moderate.
- Favorable views on the industrial property type fundamentals support increasing exposure in today's environment. SCERS made a \$70 million commitment in 2014 to the industrial space (in both the US and Europe). SCERS made an additional contribution of \$15 million to Prologis USLF in the 2<sup>nd</sup> Quarter of 2018, which further increased exposure. Going forward, exposure to logistics assets will increase as capital is called by Carlyle for the Project Rome co-invest, NREP II and NREP III.
- The "Other" property type exposure represents Sculptor Real Estate Fund III\* (parking, senior housing and cell towers), KKR Real Estate Partners Americas (senior housing), CIM Fund VIII (condominiums), Hammes Partners II and III (medical office), Jamestown Premier Property Fund (signage – One Times Square), Townsend Real Estate Fund (senior and student housing), NREP Nordic Strategies Fund II (student housing), NREP Nordic Strategies Fund III (senior living and land) and Prime Property Fund (self storage).

\*Sculptor Real Estate Fund III was previously called Och-Ziff Real Estate Fund III

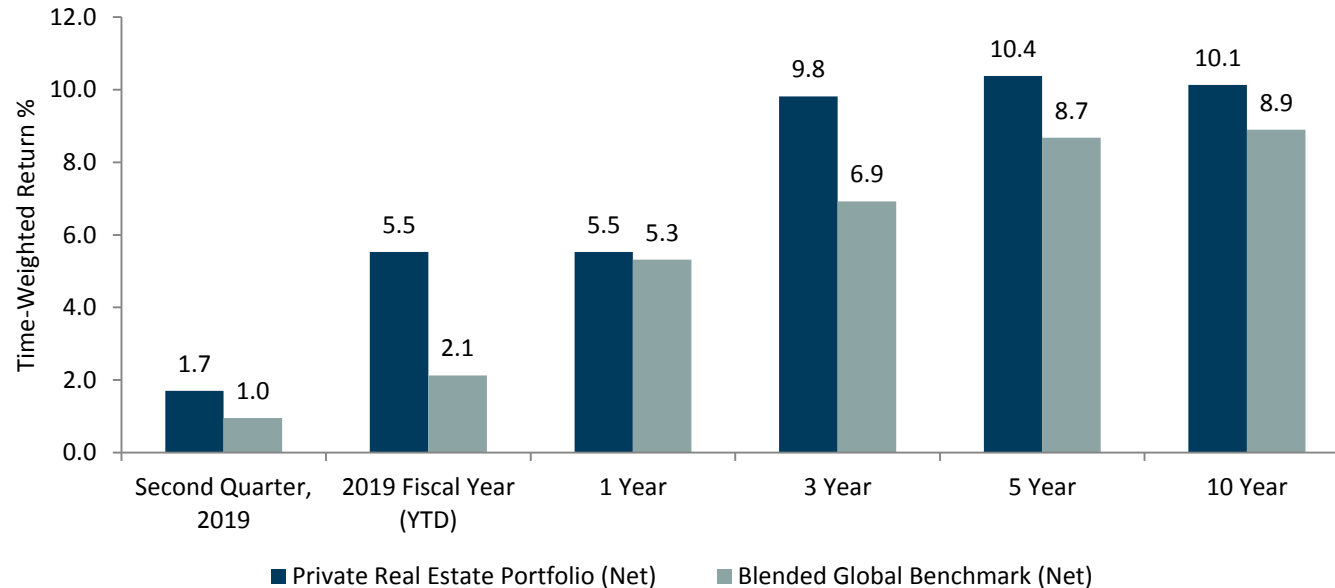
## Real Estate Private Portfolio Diversification – Geographic Region



- The diversification of the Private Portfolio is compared to the diversification of the NFI-ODCE, with a permissible deviation of  $\pm 10.0\%$  for each region. Ex-US exposure is limited to 30% of the Total Private Portfolio.
- As of the Third Quarter, the Private Portfolio was in compliance across all region except for the Pacific region. Townsend and Staff continue to evaluate future opportunities that align with SCERS Portfolio goals in the Pacific region.
- Tactical overweight/underweight positions may exist over time.
- The Private Portfolio's international exposure is 20.8%, well within its 30% constraint, but will increase as KKR Real Estate Partners Americas, Sculptor Real Estate Fund III\*, NREP Nordic Strategies Fund II & III, ECE European Prime Shopping Centre Fund II, and Prologis European Logistics Fund continue to call capital and purchase assets in Europe.
- In 2017, SCERS committed to Carlyle China Realty (\$10m) and Project Rome co-invest (\$20m initial; \$20m re-up April 2017) which will increase Ex-US exposure and diversify international exposure as both investments are 100% China. As of 3Q19, these investments provide \$38.7 million in equity exposure to China.
- Ex-US exposure consists of 3.57% in China, 1.59% in Denmark, 1.54% in Finland, 2.48% in Germany, 1.96% in France, 1.63% in Sweden, 1.1% in Netherlands, 1.48% in the UK and 5.45% in other countries.

\*Sculptor Real Estate Fund III was previously called Och-Ziff Real Estate Fund III.

# Private Real Estate Performance – Global Ancillary Benchmark (2Q19)



- The Global Ancillary Benchmark is made-up of a the NFI-ODCE (Core), NFI-ODCE + 100bps (Non-Core), GREFI Europe Core, GREFI Europe Non-Core, and GREFI Non-Core Asia Pacific to create a global blended benchmark based on weighted average invested capital for each strategy.
- GREFI reports on a 12 week lag. As a result, the ancillary benchmark will be reported on a quarterly lag to SCERS.
- The Private Portfolio's international exposure is 20.8%, well within its 30% constraint. International exposure is mainly non-core in nature, with the exception of Prologis Targeted Europe Logistics Fund.
- The SCERS Private Real Estate program has outperformed its secondary benchmark over all time periods.

## Exhibit A: Performance Flash Report



Portfolio Composition (\$)								
Total Plan Assets	Allocation		Market Value		Unfunded Commitments		Remaining Allocation	
9,975,967,256	Core	7.0%	671,701,355	6.7%	0	0.0%	26,616,353	0.3%
	Non-Core	0.00% - 5.00%	206,981,049	2.1%	171,117,091	1.7%	-153,638,877	-1.5%
	<b>Total</b>	<b>7.0%</b>	<b>878,682,404</b>	<b>8.8%</b>	<b>171,117,091</b>	<b>1.7%</b>	<b>-127,022,524</b>	<b>-1.3%</b>

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)	
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Core Portfolio (Commingled Funds & Separate Accounts)	2.0	1.7	8.6	7.5	10.5	9.3	10.7	9.4
Non-Core Portfolio (Value Added & Opportunistic, 1Q2007 Forward)	0.9	0.4	12.4	8.4	14.0	10.9	14.7	11.4
Private Real Estate Portfolio	1.8	1.4	9.6	7.6	11.4	9.7	11.6	9.8
NFI-ODCE (Core)	1.3	1.1	5.6	4.6	7.3	6.3	9.3	8.4
NFI-ODCE + 100 bps (Non-Core)	1.6	1.3	6.6	5.6	8.3	7.3	10.3	9.4
NFI-ODCE + 35 bps (Private Portfolio)	1.4	1.2	5.9	5.0	7.7	6.7	9.7	8.7

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Core Commingled Funds</b>								
Brookfield Premier Real Estate Partners	2018	100,000,000	100,000,000	0	4,162,390	103,783,508	11.8	9.9
Jamestown Premier Property Fund	2014	15,000,000	21,363,588	0	13,156,653	18,501,800	2.1	1.8
Lion Properties Fund	2018	152,400,000	153,527,721	0	38,554,456	125,533,524	14.3	11.9
MetLife Core Property Fund	2013	35,000,000	46,400,414	0	12,074,553	62,507,574	7.1	5.9
Prime Property Fund	2013	35,000,000	46,533,196	0	11,533,196	63,023,182	7.2	6.0
Principal U.S. Property Account	2015	35,000,000	35,000,000	0	0	47,944,634	5.5	4.6
Prologis European Logistics Fund <sup>2</sup>	2017	47,950,142	49,151,023	0	3,996,452	52,489,714	6.0	5.0
Prologis Targeted U.S. Logistics Fund	2015	50,000,000	50,000,000	0	6,643,178	76,413,441	8.7	7.3
Townsend Real Estate Fund, L.P.	2016	90,000,000	102,251,860	0	12,251,860	117,947,530	13.4	11.2
<b>Core Commingled Funds</b>	<b>1986</b>	<b>560,350,142</b>	<b>604,227,802</b>	<b>0</b>	<b>102,372,738</b>	<b>668,144,907</b>	<b>76.0</b>	<b>63.6</b>
<b>Core Separate Accounts</b>								
BlackRock Core Separate Account	1995	0	852,777,064	0	1,217,078,847	3,236,784	0.4	0.3
Cornerstone Separate Account	2004	0	255,784,314	0	349,671,865	319,664	0.0	0.0
<b>Core Separate Accounts</b>	<b>1996</b>	<b>0</b>	<b>1,108,561,378</b>	<b>0</b>	<b>1,566,750,712</b>	<b>3,556,448</b>	<b>0.4</b>	<b>0.3</b>
<i>Total BlackRock Separate Account</i>	<i>1996</i>	<i>0</i>	<i>872,562,491</i>	<i>0</i>	<i>1,246,578,847</i>	<i>4,094,017</i>	<i>0.5</i>	<i>0.4</i>
<b>Total Core Portfolio</b>	<b>1986</b>	<b>560,350,142</b>	<b>1,712,789,181</b>	<b>0</b>	<b>1,669,123,450</b>	<b>671,701,355</b>	<b>76.4</b>	<b>64.0</b>
<b>Value Added Portfolio</b>								
Allegis Value Trust <sup>3</sup>	2006	25,000,000	25,550,296	0	31,209,296	182,420	0.0	0.0
Asana Partners Fund II	2019	35,000,000	918,750	34,081,250	0	376,890	0.0	3.3
DRC European Real Estate Debt Fund II	2013	50,007,963	48,584,007	13,710,285	44,059,804	8,339,049	0.9	2.1
ECE European Prime Shopping Centre Fund II C	2015	33,611,623	21,416,251	13,274,613	2,379,656	27,959,754	3.2	3.9
Hammes Partners II	2015	25,000,000	26,289,116	1,604,444	16,381,048	20,582,279	2.3	2.1
Hammes Partners III	2018	25,000,000	2,241,978	28,883,022	265,673	1,444,872	0.2	2.9
NREP Nordic Strategies Fund	2014	25,130,756	22,485,011	0	26,857,409	9,697,014	1.1	0.9
NREP Nordic Strategies Fund II	2016	35,176,432	27,678,997	8,027,306	4,204,159	30,922,465	3.5	3.7
NREP Nordic Strategies Fund III	2018	39,019,632	7,659,049	27,541,111	0	6,895,657	0.8	3.3
<b>Value Added Portfolio</b>	<b>1986</b>	<b>292,946,406</b>	<b>182,823,455</b>	<b>127,122,031</b>	<b>125,357,045</b>	<b>106,400,400</b>	<b>12.1</b>	<b>22.2</b>

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Opportunistic Portfolio</b>								
BlackRock High Return Separate Account	2016	0	19,785,427	0	29,500,000	857,233	0.1	0.1
Carlyle China Project Rome Co-Investment	2017	40,000,000	31,989,923	9,222,207	0	31,502,548	3.6	3.9
Carlyle China Realty	2017	10,000,000	9,145,091	2,334,314	1,593,478	7,220,445	0.8	0.9
CIM Fund VIII	2015	35,000,000	37,721,438	520,647	5,553,879	39,922,195	4.5	3.9
KKR Real Estate Partners Americas		35,000,000	29,761,633	16,550,767	32,951,350	6,993,486	0.8	2.2
Sculptor Real Estate Fund III <sup>1,4</sup>	2014	35,000,000	24,120,547	15,367,125	21,530,614	14,084,742	1.6	2.8
<b>Opportunistic Portfolio</b>	<b>1991</b>	<b>155,000,000</b>	<b>152,524,059</b>	<b>43,995,060</b>	<b>91,129,321</b>	<b>100,580,649</b>	<b>11.4</b>	<b>13.8</b>
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>2007</b>	<b>447,946,406</b>	<b>335,347,514</b>	<b>171,117,091</b>	<b>216,486,366</b>	<b>206,981,049</b>	<b>23.6</b>	<b>36.0</b>
<b>Total Private Portfolio</b>								
<b>SCERS</b>	<b>1986</b>	<b>1,008,296,548</b>	<b>2,048,136,695</b>	<b>171,117,091</b>	<b>1,885,609,816</b>	<b>878,682,404</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup> Fees for this Fund are charged on total commitments. As a result of Och-Ziff only calling a portion of SCERS' committed capital, the gross to net spread is significant and expected to normalize over time.

<sup>2</sup> Represent composite performance of Prologis Targeted Europe Logistics Fund and Prologis European Logistics Fund

<sup>3</sup> Net IRR and Equity Multiple may be missing due to investment managers being unable to provide historical cash flows back to inception.

<sup>4</sup> Previously Och-Ziff Real Estate Fund III

Returns (%)	Market Value (\$)	Quarter				Fiscal Year 2020				1 Year				3 Year			
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
<b>Core Commingled Funds</b>																	
Brookfield Premier Real Estate Partners	103,783,508	0.7	1.8	2.5	2.0	0.7	1.8	2.5	2.0	2.5	7.5	10.1	8.1				
Jamestown Premier Property Fund	18,501,800	0.5	0.2	0.7	0.6	0.5	0.2	0.7	0.6	2.7	1.4	4.1	3.7	3.7	6.1	10.0	7.9
Lion Properties Fund	125,533,524	1.0	0.7	1.7	1.5	1.0	0.7	1.7	1.5	4.0	3.2	7.3	6.4				
MetLife Core Property Fund	62,507,574	1.4	-0.1	1.3	1.1	1.4	-0.1	1.3	1.1	5.1	2.3	7.5	7.0	5.0	3.4	8.6	8.1
Prime Property Fund	63,023,182	1.0	0.8	1.7	1.4	1.0	0.8	1.7	1.4	3.9	3.9	7.9	6.6	4.0	4.9	9.1	7.9
Principal U.S. Property Account	47,944,634	1.0	0.9	1.9	1.6	1.0	0.9	1.9	1.6	4.3	2.6	7.0	6.0	4.6	4.1	8.8	7.8
Prologis European Logistics Fund <sup>4</sup>	52,489,714	1.3	-2.1	-0.8	-1.3	1.3	-2.1	-0.8	-1.3	5.3	2.6	8.0	5.9	6.0	8.0	14.4	12.2
Prologis Targeted U.S. Logistics Fund	76,413,441	1.2	4.2	5.4	4.6	1.2	4.2	5.4	4.6	4.7	13.0	18.2	15.8	5.1	15.6	21.3	18.2
Townsend Real Estate Fund, L.P.	117,947,530	1.0	1.1	2.1	2.0	1.0	1.1	2.1	2.0	4.2	3.1	7.4	7.1	4.4	5.0	9.5	9.3
<b>Core Commingled Funds</b>	<b>668,144,907</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.7</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.7</b>	<b>4.0</b>	<b>4.6</b>	<b>8.8</b>	<b>7.6</b>	<b>4.5</b>	<b>6.6</b>	<b>11.4</b>	<b>10.1</b>
<b>Core Separate Accounts</b>																	
BlackRock Core Separate Account	3,236,784	2.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	11.4	10.6	22.9	22.9	7.1	4.2	11.6	10.6
Cornerstone Separate Account <sup>5</sup>	319,664																
<b>Core Separate Accounts<sup>5</sup></b>	<b>3,556,448</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>	<b>1.0</b>	<b>10.3</b>	<b>21.7</b>	<b>33.3</b>	<b>33.3</b>	<b>6.6</b>	<b>9.5</b>	<b>16.4</b>	<b>15.6</b>
Total BlackRock Separate Account <sup>5</sup>	4,094,017	1.2	1.2	2.5	2.5	1.2	1.2	2.5	2.5	-0.1	25.9	25.9	21.7	2.8	9.9	13.1	10.8
<b>Total Core Portfolio</b>	<b>671,701,355</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.7</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.7</b>	<b>4.0</b>	<b>4.5</b>	<b>8.6</b>	<b>7.5</b>	<b>4.5</b>	<b>5.8</b>	<b>10.5</b>	<b>9.3</b>
<b>Value Added Portfolio</b>																	
Allegis Value Trust <sup>3</sup>	182,420																
Asana Partners Fund II	376,890																
DRC European Real Estate Debt Fund II	8,339,049	0.3	-3.2	-2.9	-3.1	0.3	-3.2	-2.9	-3.1	7.9	-5.9	1.5	0.5	9.7	-1.8	7.7	6.5
ECE European Prime Shopping Centre Fund II C	27,959,754	2.6	-2.2	0.4	-0.1	2.6	-2.2	0.4	-0.1	21.2	0.4	20.9	18.6	7.7	10.5	18.9	16.3
Hammes Partners II	20,582,279	1.9	21.1	23.0	22.6	1.9	21.1	23.0	22.6	9.3	23.2	34.2	30.6	8.6	15.1	24.7	19.9
Hammes Partners III	1,444,872	2.3	4.7	7.0	-0.6	2.3	4.7	7.0	-0.6								
NREP Nordic Strategies Fund	9,697,014	0.6	-1.9	-1.3	-2.9	0.6	-1.9	-1.3	-2.9	3.3	-1.8	1.4	-18.8	5.9	7.7	13.9	5.3
NREP Nordic Strategies Fund II	30,922,465	0.1	-2.0	-1.9	-2.5	0.1	-2.0	-1.9	-2.5	1.5	8.7	10.3	7.2	3.2	20.6	24.3	17.2
NREP Nordic Strategies Fund III	6,895,657	-0.6	-4.2	-4.8	-8.2	-0.6	-4.2	-4.8	-8.2	-7.3	4.9	-2.4	-29.9				
<b>Value Added Portfolio</b>	<b>106,400,400</b>	<b>1.0</b>	<b>1.5</b>	<b>2.5</b>	<b>1.5</b>	<b>1.0</b>	<b>1.5</b>	<b>2.5</b>	<b>1.5</b>	<b>7.7</b>	<b>5.4</b>	<b>13.2</b>	<b>6.0</b>	<b>6.8</b>	<b>8.1</b>	<b>15.3</b>	<b>10.8</b>
<b>Opportunistic Portfolio</b>																	
BlackRock High Return Separate Account	857,233																
Carlisle China Project Rome Co-Investment	31,502,548	0.1	-2.2	-2.1	-2.4	0.1	-2.2	-2.1	-2.4	-0.2	6.3	6.1	4.7				
Carlisle China Realty	7,220,445	0.0	-2.2	-2.2	-2.7	0.0	-2.2	-2.2	-2.7	-1.6	8.4	6.8	4.5				
CIM Fund VIII	39,922,195	0.0	-1.0	-1.0	-1.3	0.0	-1.0	-1.0	-1.3	0.1	6.6	6.7	5.5	0.1	7.6	7.6	6.1
KKR Real Estate Partners Americas	6,993,486	10.0	-11.3	-1.3	0.3	10.0	-11.3	-1.3	0.3	15.1	-13.1	1.2	3.3	17.3	-8.4	8.4	8.7
Sculptor Real Estate Fund III <sup>1,4</sup>	14,084,742	1.8	2.2	4.0	3.7	1.8	2.2	4.0	3.7	9.4	8.8	18.8	15.9	10.6	19.0	31.0	26.9
<b>Opportunistic Portfolio</b>	<b>100,580,649</b>	<b>0.8</b>	<b>-1.6</b>	<b>-0.8</b>	<b>-1.0</b>	<b>0.8</b>	<b>-1.6</b>	<b>-0.8</b>	<b>-1.0</b>	<b>1.7</b>	<b>9.1</b>	<b>10.9</b>	<b>9.1</b>	<b>3.3</b>	<b>9.1</b>	<b>12.6</b>	<b>10.5</b>
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>206,981,049</b>	<b>1.0</b>	<b>-0.1</b>	<b>0.9</b>	<b>0.4</b>	<b>1.0</b>	<b>-0.1</b>	<b>0.9</b>	<b>0.4</b>	<b>4.7</b>	<b>7.5</b>	<b>12.4</b>	<b>8.4</b>	<b>5.1</b>	<b>8.6</b>	<b>14.0</b>	<b>10.9</b>
<b>Total Private Portfolio</b>																	
SCERS	878,682,404	1.0	0.8	1.8	1.4	1.0	0.8	1.8	1.4	4.2	5.3	9.6	7.6	4.7	6.5	11.4	9.7



Returns (%)	Market Value (\$)	Quarter				Fiscal Year 2020				1 Year				3 Year			
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
<b>Ex-US Dollar Denominated Investments (In Local Currency)</b>																	
Prologis Targeted Europe Logistics Fund (Euro)	€ 35,142,277	1.3	2.0	3.3	2.8	1.3	2.0	3.3	2.8	5.4	9.0	14.8	12.5	6.1	9.0	15.5	13.3
DRC European Real Estate Debt Fund II (Pound Sterling)	£6,780,534	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.0	7.9	0.0	7.9	6.8	9.7	0.0	9.7	8.5
ECE European Prime Shopping Centre Fund II (Euro)	€ 25,655,870	2.7	2.0	4.8	4.2	2.7	2.0	4.8	4.2	21.4	6.5	29.0	26.5	7.6	11.4	20.2	17.6
NREP Nordic Strategies Fund (Euro)	€ 8,897,980	0.6	2.7	3.3	1.5	0.6	2.7	3.3	1.5	3.3	4.9	8.4	-13.1	5.9	9.0	15.2	6.5
NREP Nordic Strategies Fund II (Euro)	€ 28,374,454	0.1	2.2	2.3	1.7	0.1	2.2	2.3	1.7	1.5	15.7	17.4	14.1	3.2	21.7	25.4	18.3
NREP Nordic Strategies Fund III (Euro)	€ 6,327,455	-0.6	0.0	-0.6	-4.2	-0.6	0.0	-0.6	-4.2	-7.5	12.4	4.5	-25.0				
<b>Indices</b>																	
NFI ODCE+ 35bps				1.4	1.2			1.4	1.2			5.9	5.0			7.7	6.7
NFI-ODCE		1.0	0.3	1.3	1.1	1.0	0.3	1.3	1.1	4.2	1.4	5.6	4.6	4.3	2.9	7.3	6.3
NFI-ODCE + 100bps				1.6	1.3			1.6	1.3			6.6	5.6			8.3	7.3
CPI + 500 bps				1.6				1.6				6.8				7.2	

<sup>1</sup> Fees for this Fund are charged on total commitments. As a result of Och-Ziff only calling a portion of SCERS' committed capital, the gross to net spread is significant and expected to normalize over time.

<sup>2</sup> Represent composite performance of Prologis Targeted Europe Logistics Fund and Prologis European Logistics Fund.

<sup>3</sup> Net IRR and Equity Multiple may be missing due to investment managers being unable to provide historical cash flows back to inception.

<sup>4</sup> Previously Och-Ziff Real Estate Fund III.

<sup>5</sup> Core Separate Account returns are no longer meaningful as all assets have been sold.

Returns (%)	Market Value (\$)	5 Year				10 Year				Inception				TWR Calculation Inception	Net IRR	Equity Multiple				
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET							
<b>Core Commingled Funds</b>																				
Brookfield Premier Real Estate Partners	103,783,508													2.5	7.5	10.1	8.1	4Q18	8.1	1.1
Jamestown Premier Property Fund	18,501,800	4.1	8.2	12.6	10.0									4.2	8.3	12.7	10.1	1Q14	10.6	1.5
Lion Properties Fund	125,533,524													4.0	3.2	7.3	6.4	4Q18	6.5	1.1
MetLife Core Property Fund	62,507,574	5.1	5.0	10.3	9.8									5.1	6.1	11.4	10.9	1Q14	10.9	1.6
Prime Property Fund	63,023,182	4.2	6.7	11.1	9.9									4.2	7.2	11.7	10.5	4Q13	10.4	1.6
Principal U.S. Property Account	47,944,634													4.7	4.4	9.2	8.2	4Q15	8.2	1.4
Prologis European Logistics Fund <sup>c</sup>	52,489,714													4.8	8.2	13.3	11.6	1Q16	10.0	1.2
Prologis Targeted U.S. Logistics Fund	76,413,441													5.4	13.5	19.4	16.7	3Q15	17.3	1.7
Townsend Real Estate Fund, L.P.	117,947,530													4.4	4.6	9.2	8.9	2Q16	8.6	1.3
<b>Core Commingled Funds</b>	<b>668,144,907</b>	<b>4.6</b>	<b>7.3</b>	<b>12.1</b>	<b>10.8</b>	<b>4.9</b>	<b>6.4</b>	<b>11.5</b>	<b>10.5</b>	<b>4.5</b>	<b>3.4</b>	<b>8.0</b>	<b>7.1</b>	<b>4Q86</b>	<b>6.9</b>	<b>1.3</b>				
<b>Core Separate Accounts</b>																				
BlackRock Core Separate Account	3,236,784	6.3	6.2	12.8	11.4	6.1	6.7	13.1	11.7	7.2	3.3	10.6	9.1	1Q96	9.9	1.4				
Cornerstone Separate Account	319,664													3Q04	5.6	1.4				
<b>Core Separate Accounts</b>	<b>3,556,448</b>	<b>6.0</b>	<b>7.4</b>	<b>13.6</b>	<b>12.5</b>	<b>5.9</b>	<b>7.4</b>	<b>13.6</b>	<b>12.5</b>	<b>7.2</b>	<b>3.5</b>	<b>10.9</b>	<b>9.7</b>	<b>1Q96</b>	<b>8.8</b>	<b>1.4</b>				
<i>Total BlackRock Separate Account</i>	<i>4,094,017</i>	<i>3.7</i>	<i>8.6</i>	<i>12.6</i>	<i>10.5</i>	<i>4.7</i>	<i>7.6</i>	<i>12.6</i>	<i>10.9</i>	<i>6.7</i>	<i>3.9</i>	<i>10.8</i>	<i>9.3</i>	<i>1Q96</i>	<i>9.7</i>	<i>1.4</i>				
<b>Total Core Portfolio</b>	<b>671,701,355</b>	<b>4.7</b>	<b>5.8</b>	<b>10.7</b>	<b>9.4</b>	<b>5.2</b>	<b>6.4</b>	<b>11.8</b>	<b>10.6</b>	<b>5.5</b>	<b>2.0</b>	<b>7.6</b>	<b>6.6</b>	<b>4Q86</b>	<b>8.3</b>	<b>1.4</b>				
<b>Value Added Portfolio</b>																				
Allegis Value Trust <sup>3</sup>	182,420													1Q07	2.5	1.2				
Asana Partners Fund II	376,890													4Q19						
DRC European Real Estate Debt Fund II	8,339,049	10.9	-6.2	4.2	2.7					10.1	-5.7	4.0	2.3	1Q14	3.1	1.1				
ECE European Prime Shopping Centre Fund II C	27,959,754									6.2	15.3	22.4	19.8	4Q15	19.7	1.4				
Hammes Partners II	20,582,279									10.1	14.0	25.3	19.0	3Q15	18.0	1.4				
Hammes Partners III	1,444,872									3.5	9.6	13.4	-25.9	1Q19	-39.5	0.8				
NREP Nordic Strategies Fund	9,697,014									9.1	13.7	23.6	16.7	1Q15	23.2	1.6				
NREP Nordic Strategies Fund II	30,922,465									2.8	18.9	22.2	12.9	3Q16	12.7	1.3				
NREP Nordic Strategies Fund III	6,895,657									-7.3	4.9	-2.4	-29.9	4Q18	-15.8	0.9				
<b>Value Added Portfolio</b>	<b>106,400,400</b>	<b>7.9</b>	<b>7.3</b>	<b>15.5</b>	<b>11.9</b>	<b>7.3</b>	<b>4.7</b>	<b>12.2</b>	<b>9.4</b>	<b>2.2</b>	<b>3.8</b>	<b>6.0</b>	<b>4.7</b>	<b>4Q86</b>	<b>5.0</b>	<b>1.2</b>				
<b>Opportunistic Portfolio</b>																				
BlackRock High Return Separate Account	857,233													3Q16	19.2	1.5				
Carlyle China Project Rome Co-Investment	31,502,548									-1.6	4.8	3.1	0.0	3Q17	-1.0	1.0				
Carlyle China Realty	7,220,445									-0.3	4.7	4.5	1.3	3Q17	-2.6	1.0				
CIM Fund VIII	39,922,195									0.1	9.9	10.0	7.9	2Q15	7.0	1.2				
KKR Real Estate Partners Americas	6,993,486	14.5	-5.2	9.4	8.3					17.9	-8.4	9.7	8.5	2Q14	14.3	1.3				
Sculptor Real Estate Fund III <sup>4</sup>	14,084,742	14.7	15.5	31.9	12.6					14.7	15.5	31.9	12.6	4Q14	24.1	1.5				
<b>Opportunistic Portfolio</b>	<b>100,580,649</b>	<b>4.3</b>	<b>9.1</b>	<b>13.8</b>	<b>9.8</b>	<b>5.8</b>	<b>12.4</b>	<b>19.5</b>	<b>14.8</b>	<b>2.0</b>	<b>6.3</b>	<b>8.6</b>	<b>6.8</b>	<b>1Q91</b>	<b>17.6</b>	<b>1.3</b>				
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>206,981,049</b>	<b>6.4</b>	<b>7.9</b>	<b>14.7</b>	<b>11.4</b>	<b>6.3</b>	<b>9.7</b>	<b>16.5</b>	<b>13.1</b>	<b>4.7</b>	<b>5.1</b>	<b>9.9</b>	<b>5.7</b>	<b>1Q07</b>	<b>7.3</b>	<b>1.3</b>				
<b>Total Private Portfolio</b>																				
SCERS	878,682,404	5.1	6.3	11.6	9.8	5.4	7.0	12.6	11.0	4.4	4.7	9.3	8.3	4Q86	8.2	1.3				

Returns (%)	Market Value (\$)	5 Year				10 Year				Inception				TWR Calculation Inception	Net IRR	Equity Multiple		
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET					
<b>Ex-US Dollar Denominated Investments (In Local Currency)</b>																		
Prologis Targeted Europe Logistics Fund (Euro)	€ 35,142,277																	
DRC European Real Estate Debt Fund II (Pound Sterling)	£6,780,534	10.9	-0.8	10.1	8.6									1Q16	14.9	1.2		
ECE European Prime Shopping Centre Fund II (Euro)	€ 25,655,870													1Q14	7.8	1.2		
NREP Nordic Strategies Fund (Euro)	€ 8,897,980													4Q15	21.7	1.5		
NREP Nordic Strategies Fund II (Euro)	€ 28,374,454													1Q15	25.2	1.7		
NREP Nordic Strategies Fund III (Euro)	€ 6,327,455													3Q16	15.0	1.3		
														4Q18	-9.6	0.9		
<b>Indices</b>																		
NFI ODCE+ 35bps				9.7	8.7			11.2	10.2					7.7	6.6	4Q86		
NFI-ODCE		4.4	4.7	9.3	8.4		5.0	5.6	10.9	9.8				6.7	0.5	7.3	6.3	4Q86
NFI-ODCE + 100bps				10.3	9.4				11.9	10.8						8.3	7.3	4Q86
CPI + 500 bps				6.6					6.8							7.7		4Q86

<sup>1</sup> Fees for this Fund are charged on total commitments. As a result of Och-Ziff only calling a portion of SCERS' committed capital, the gross to net spread is significant and expected to normalize over time.

<sup>2</sup> Represent composite performance of Prologis Targeted Europe Logistics Fund and Prologis European Logistics Fund.

<sup>3</sup> Net IRR and Equity Multiple may be missing due to investment managers being unable to provide historical cash flows back to inception.

<sup>4</sup> Previously Och-Ziff Real Estate Fund III.

<sup>5</sup> Core Seperate Account returns are no longer meaningful as all assets have been sold.

Returns (%)	Market Value (\$)	2019		Fiscal Year 2020		2018		2017		2016		2015		2014		2013		2012	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
<b>Core Commingled Funds</b>																			
Brookfield Premier Real Estate Partners	103,783,508	7.6	6.1	2.5	2.0	2.3	1.9												
Jamestown Premier Property Fund	18,501,800	2.8	2.5	0.7	0.6	9.7	7.7	18.0	14.2	6.6	5.3	22.4	17.3	14.7	11.9				
Lion Properties Fund	125,533,524	5.2	4.5	1.7	1.5	2.0	1.8												
MetLife Core Property Fund	62,507,574	6.3	6.0	1.3	1.1	7.8	7.3	8.4	7.9	9.3	8.8	16.9	16.3	17.4	16.9				
Prime Property Fund	63,023,182	5.5	4.6	1.7	1.4	9.1	8.0	9.9	8.7	10.4	9.2	15.9	14.6	15.5	14.1	3.8	3.6		
Principal U.S. Property Account	47,944,634	5.4	4.7	1.9	1.6	9.1	8.1	9.1	8.1	10.0	9.0	3.0	2.8						
Prologis European Logistics Fund <sup>2</sup>	52,489,714	5.0	3.5	-0.8	-1.3	13.6	10.8	30.4	28.5	2.8	2.4								
Prologis Targeted U.S. Logistics Fund	76,413,441	13.8	12.0	5.4	4.6	18.5	16.1	24.2	20.3	16.1	14.2	9.1	7.9						
Townsend Real Estate Fund, L.P.	117,947,530	5.7	5.5	2.1	2.0	9.0	8.8	11.0	10.8	8.4	8.2								
<b>Core Commingled Funds</b>	<b>668,144,907</b>	<b>6.6</b>	<b>5.7</b>	<b>2.0</b>	<b>1.7</b>	<b>10.9</b>	<b>9.7</b>	<b>14.2</b>	<b>12.8</b>	<b>9.8</b>	<b>8.9</b>	<b>15.7</b>	<b>14.1</b>	<b>13.5</b>	<b>12.4</b>	<b>10.2</b>	<b>9.3</b>	<b>11.1</b>	<b>10.1</b>
<b>Core Separate Accounts</b>																			
BlackRock Core Separate Account	3,236,784					15.8	14.9	9.1	7.5	11.3	9.3	15.3	13.9	16.3	12.5	11.8	9.6	13.5	13.0
Cornerstone Separate Account	319,664					-8.4	-8.8	21.5	20.8	14.0	13.3	2.4	1.6	14.0	13.2	11.3	10.5	16.2	15.4
<b>Core Separate Accounts</b>	<b>3,556,448</b>	<b>5.4</b>	<b>5.4</b>	<b>1.0</b>	<b>1.0</b>	<b>28.5</b>	<b>27.7</b>	<b>12.8</b>	<b>11.6</b>	<b>10.0</b>	<b>8.6</b>	<b>7.7</b>	<b>6.6</b>	<b>16.0</b>	<b>13.5</b>	<b>11.0</b>	<b>9.5</b>	<b>14.1</b>	<b>13.5</b>
<i>Total BlackRock Separate Account</i>	<i>4,094,017</i>	<i>16.5</i>	<i>15.3</i>	<i>2.5</i>	<i>2.5</i>	<i>10.6</i>	<i>7.2</i>	<i>10.6</i>	<i>9.0</i>	<i>8.6</i>	<i>7.0</i>	<i>10.7</i>	<i>9.4</i>	<i>17.0</i>	<i>13.6</i>	<i>10.9</i>	<i>9.0</i>	<i>13.1</i>	<i>12.5</i>
<b>Total Core Portfolio</b>	<b>671,701,355</b>	<b>6.5</b>	<b>5.7</b>	<b>2.0</b>	<b>1.7</b>	<b>8.6</b>	<b>7.4</b>	<b>13.6</b>	<b>12.3</b>	<b>9.8</b>	<b>8.5</b>	<b>10.4</b>	<b>9.2</b>	<b>15.3</b>	<b>13.2</b>	<b>10.8</b>	<b>9.5</b>	<b>13.3</b>	<b>12.6</b>
<b>Value Added Portfolio</b>																			
Allegis Value Trust <sup>3</sup>	182,420					-22.6	-22.8	8.2	7.8	9.9	9.4	8.6	8.0	10.8	10.2	4.7	4.0	21.8	20.9
Asana Partners Fund II	376,890																		
DRC European Real Estate Debt Fund II	8,339,049	3.9	3.1	-2.9	-3.1	-0.6	-1.7	23.8	22.3	-7.8	-8.9	5.0	3.0	1.4	-2.1				
ECE European Prime Shopping Centre Fund II	27,959,754	14.4	13.0	0.4	-0.1	15.1	12.8	24.7	21.5	22.1	19.7	12.1	11.0						
Hammes Partners II	20,582,279	30.1	27.7	23.0	22.6	27.9	19.6	12.7	10.0	16.2	10.4	19.4	12.9						
Hammes Partners III	1,444,872	13.4	-25.9																
NREP Nordic Strategies Fund	9,697,014	0.9	-19.0	-1.3	-2.9	0.8	0.1	41.2	40.1	23.1	21.7	55.1	50.8						
NREP Nordic Strategies Fund II	30,922,465	4.2	2.3	-1.9	-2.5	17.0	12.3	44.9	34.4	8.6	-3.8								
NREP Nordic Strategies Fund III	6,895,657	0.4	-18.1	-4.8	-8.2	-2.8	-14.4												
<b>Value Added Portfolio</b>	<b>106,400,400</b>	<b>10.1</b>	<b>4.2</b>	<b>2.5</b>	<b>1.5</b>	<b>10.5</b>	<b>6.3</b>	<b>24.9</b>	<b>22.3</b>	<b>9.5</b>	<b>7.0</b>	<b>19.1</b>	<b>17.0</b>	<b>15.7</b>	<b>13.7</b>	<b>13.3</b>	<b>10.8</b>	<b>19.6</b>	<b>18.1</b>
<b>Opportunistic Portfolio</b>																			
BlackRock High Return Separate Account	857,233					17.0	14.4	24.0	21.7	6.3	6.3								
Carlyle China Project Rome Co-Investment	31,502,548	4.9	3.9	-2.1	-2.4	-2.5	-7.1	4.7	3.6										
Carlyle China Realty	7,220,445	5.8	4.2	-2.2	-2.7	1.6	-1.4	2.7	0.2										
CIM Fund VIII	39,922,195	4.1	3.3	-1.0	-1.3	9.4	8.0	8.4	6.7	6.4	4.0	16.9	13.8						
KKR Real Estate Partners Americas	6,993,486	3.3	4.3	-1.3	0.3	8.6	9.0	11.9	10.4	6.8	5.8	15.7	11.4	7.4	6.1				
Sculptor Real Estate Fund III <sup>4</sup>	14,084,742	12.9	11.1	4.0	3.7	29.7	25.7	43.3	38.2	30.0	22.2	33.7	6.9	9.4	-28.3				
<b>Opportunistic Portfolio</b>	<b>100,580,649</b>	<b>7.1</b>	<b>6.0</b>	<b>-0.8</b>	<b>-1.0</b>	<b>11.1</b>	<b>8.7</b>	<b>16.9</b>	<b>14.2</b>	<b>10.2</b>	<b>7.6</b>	<b>23.1</b>	<b>12.7</b>	<b>32.6</b>	<b>25.2</b>	<b>11.7</b>	<b>9.4</b>	<b>54.2</b>	<b>38.5</b>
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>206,981,049</b>	<b>8.9</b>	<b>5.8</b>	<b>0.9</b>	<b>0.4</b>	<b>10.8</b>	<b>7.7</b>	<b>21.1</b>	<b>18.4</b>	<b>9.9</b>	<b>7.4</b>	<b>19.7</b>	<b>15.3</b>	<b>18.9</b>	<b>15.9</b>	<b>16.7</b>	<b>13.5</b>	<b>34.6</b>	<b>26.9</b>
<b>Total Private Portfolio</b>																			
<b>SCERS</b>	<b>878,682,404</b>	<b>7.1</b>	<b>5.7</b>	<b>1.8</b>	<b>1.4</b>	<b>9.2</b>	<b>7.5</b>	<b>15.4</b>	<b>13.8</b>	<b>9.8</b>	<b>8.2</b>	<b>12.2</b>	<b>10.5</b>	<b>15.8</b>	<b>13.5</b>	<b>11.4</b>	<b>9.9</b>	<b>16.4</b>	<b>14.7</b>
<b>Indices</b>																			
NFI-ODCE + 35 bps		3.9	3.3	1.4	1.2	8.7	7.8	8.0	7.1	9.2	8.2	15.4	14.4	12.9	11.9	14.3	13.3	11.3	10.2
NFI-ODCE		3.8	3.1	1.3	1.1	8.3	7.4	7.6	6.7	8.8	7.8	15.0	14.0	12.5	11.5	13.9	12.9	10.9	9.8
NFI-ODCE + 100 bps		2.9	2.5	1.6	1.3	9.4	8.4	8.7	7.7	9.9	8.9	16.2	15.1	13.6	12.6	15.1	14.0	12.0	10.9
CPI + 500 bps		5.2		1.6		7.0		7.2		7.2		5.7		5.7		6.6		6.8	

<sup>1</sup> Fees for this Fund are charged on total commitments. As a result of Och-Ziff only calling a portion of SCERS' committed capital, the gross to net spread is significant and expected to normalize over time.

<sup>2</sup> Represent composite performance of Prologis Targeted Europe Logistics Fund and Prologis European Logistics Fund.

<sup>3</sup> Net IRR and Equity Multiple may be missing due to investment managers being unable to provide historical cash flows back to inception.

<sup>4</sup> Previously Och-Ziff Real Estate Fund III.

<sup>5</sup> Core Separate Account returns are no longer meaningful as all assets have been sold.

Returns (%)	Market Value (\$)	2011		2010		2009		2008		2007		2006	
		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
<b>Core Commingled Funds</b>													
Brookfield Premier Real Estate Partners	103,783,508												
Jamestown Premier Property Fund	18,501,800												
Lion Properties Fund	125,533,524												
MetLife Core Property Fund	62,507,574												
Prime Property Fund	63,023,182												
Principal U.S. Property Account	47,944,634												
Prologis European Logistics Fund <sup>2</sup>	52,489,714												
Prologis Targeted U.S. Logistics Fund	76,413,441												
Townsend Real Estate Fund, L.P.	117,947,530												
<b>Core Commingled Funds</b>	<b>668,144,907</b>	<b>16.4</b>	<b>15.5</b>	<b>14.1</b>	<b>13.3</b>	<b>-33.0</b>	<b>-33.6</b>	<b>-13.8</b>	<b>-14.6</b>	<b>15.5</b>	<b>14.5</b>	<b>16.9</b>	<b>15.8</b>
<b>Core Separate Accounts</b>													
BlackRock Core Separate Account	3,236,784	17.8	17.4	20.7	19.6	-29.5	-29.1	-13.9	-14.3	21.2	16.8	17.7	13.3
Cornerstone Separate Account	319,664	24.9	23.9	21.2	20.2	-31.7	-32.4	-9.4	-10.1	11.9	11.1	11.1	10.2
<b>Core Separate Accounts</b>	<b>3,556,448</b>	<b>18.7</b>	<b>18.2</b>	<b>18.6</b>	<b>17.6</b>	<b>-28.5</b>	<b>-28.7</b>	<b>-10.5</b>	<b>-11.1</b>	<b>16.3</b>	<b>13.6</b>	<b>15.2</b>	<b>12.1</b>
<i>Total BlackRock Separate Account</i>	<i>4,094,017</i>	<i>16.1</i>	<i>15.7</i>	<i>17.3</i>	<i>16.4</i>	<i>-26.8</i>	<i>-26.7</i>	<i>-11.1</i>	<i>-11.6</i>	<i>18.5</i>	<i>15.0</i>	<i>16.8</i>	<i>13.1</i>
<b>Total Core Portfolio</b>	<b>671,701,355</b>	<b>18.2</b>	<b>17.6</b>	<b>17.6</b>	<b>16.7</b>	<b>-29.5</b>	<b>-29.8</b>	<b>-11.3</b>	<b>-12.0</b>	<b>16.1</b>	<b>13.8</b>	<b>15.5</b>	<b>12.7</b>
<b>Value Added Portfolio</b>													
Allegis Value Trust <sup>3</sup>	182,420	15.7	14.7	21.6	20.4	-62.2	-62.8	-21.2	-23.9	38.6	28.4		
Asana Partners Fund II	376,890												
DRC European Real Estate Debt Fund II	8,339,049												
ECE European Prime Shopping Centre Fund II	27,959,754												
Hammes Partners II	20,582,279												
Hammes Partners III	1,444,872												
NREP Nordic Strategies Fund	9,697,014												
NREP Nordic Strategies Fund II	30,922,465												
NREP Nordic Strategies Fund III	6,895,657												
<b>Value Added Portfolio</b>	<b>106,400,400</b>	<b>16.7</b>	<b>14.7</b>	<b>23.2</b>	<b>20.3</b>	<b>-56.4</b>	<b>-57.6</b>	<b>-31.2</b>	<b>-33.5</b>	<b>18.2</b>	<b>5.6</b>	<b>0.8</b>	<b>0.5</b>
<b>Opportunistic Portfolio</b>													
BlackRock High Return Separate Account	857,233												
Carlyle China Project Rome Co-Investment	31,502,548												
Carlyle China Realty	7,220,445												
CIM Fund VIII	39,922,195												
KKR Real Estate Partners Americas	6,993,486												
Sculptor Real Estate Fund III <sup>4</sup>	14,084,742												
<b>Opportunistic Portfolio</b>	<b>100,580,649</b>	<b>-10.1</b>	<b>-8.0</b>	<b>42.4</b>	<b>34.2</b>	<b>54.0</b>	<b>43.5</b>	<b>-44.5</b>	<b>-45.4</b>	<b>3.4</b>	<b>2.6</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>206,981,049</b>	<b>-0.3</b>	<b>0.4</b>	<b>37.0</b>	<b>30.4</b>	<b>-13.5</b>	<b>-17.8</b>	<b>-33.7</b>	<b>-35.7</b>	<b>18.2</b>	<b>5.6</b>		
<b>Total Private Portfolio</b>													
<b>SCERS</b>	<b>878,682,404</b>	<b>14.9</b>	<b>14.5</b>	<b>20.6</b>	<b>18.8</b>	<b>-28.1</b>	<b>-28.8</b>	<b>-12.8</b>	<b>-13.5</b>	<b>15.8</b>	<b>13.4</b>	<b>15.5</b>	<b>12.7</b>
<b>Indices</b>													
NFI-ODCE + 35 bps		16.4	15.4	16.8	15.7	-29.5	-30.1	-9.7	-10.4	16.4	15.2	16.7	15.7
NFI-ODCE		16.0	15.0	16.4	15.3	-29.8	-30.4	-10.0	-10.7	16.0	14.8	16.3	15.3
NFI-ODCE + 100 bps		17.1	16.1	17.5	16.4	-29.1	-29.7	-9.1	-9.8	17.1	16.0	17.5	16.4
CPI + 500 bps		8.2		6.5		8.0		5.0		9.3		7.7	

<sup>1</sup> Fees for this Fund are charged on total commitments. As a result of Och-Ziff only calling a portion of SCERS' committed capital, the gross to net spread is significant and expected to normalize over time.

<sup>2</sup> Represent composite performance of Prologis Targeted Europe Logistics Fund and Prologis European Logistics Fund.

<sup>3</sup> Net IRR and Equity Multiple may be missing due to investment managers being unable to provide historical cash flows back to inception.

<sup>4</sup> Previously Och-Ziff Real Estate Fund III.

<sup>5</sup> Core Separate Account returns are no longer meaningful as all assets have been sold.

Quarterly Cash Flow Activity (\$)	Beginning Market Value	Contributions	Distributions	Withdrawals	Gross Income	Manager Fees	Appreciation	Ending Market Value	LTV (%)
<b>Core Commingled Funds</b>									
Brookfield Premier Real Estate Partners	102,740,334	0	1,058,562	0	745,884	498,501	1,854,353	103,783,508	45.6
Jamestown Premier Property Fund	18,397,265	110,335	110,335	0	88,968	29,021	44,588	18,501,800	41.8
Lion Properties Fund	155,505,371	317,953	1,551,960	31,000,000	1,519,297	317,953	1,060,817	125,533,524	22.5
MetLife Core Property Fund	61,816,896	660,642	674,139	0	840,356	74,326	-61,855	62,507,574	23.1
Prime Property Fund	62,145,779	612,867	612,867	0	594,770	190,379	473,011	63,023,182	16.5
Principal U.S. Property Account	47,176,963	0	0	0	463,820	114,010	417,861	47,944,634	18.0
Prologis European Logistics Fund	39,966,140	14,671,030	1,445,341	0	687,579	261,761	-1,127,932	52,489,714	19.8
Prologis Targeted U.S. Logistics Fund	73,497,105	0	498,800	0	867,321	532,533	3,080,347	76,413,441	17.3
Townsend Real Estate Fund, L.P.	115,592,247	1,179,919	1,179,919	0	1,188,850	65,256	1,231,689	117,947,530	44.0
<b>Core Commingled Funds</b>	<b>676,838,100</b>	<b>17,552,746</b>	<b>7,131,923</b>	<b>31,000,000</b>	<b>6,996,845</b>	<b>2,083,740</b>	<b>6,972,879</b>	<b>668,144,907</b>	<b>31.0</b>
<b>Core Separate Accounts</b>									
BlackRock Core Separate Account	3,158,019	0	0	0	78,765	0	0	3,236,784	0.0
Cornerstone Separate Account	361,775	0	0	0	-42,111	0	0	319,664	0.0
<b>Core Separate Accounts</b>	<b>3,519,794</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,654</b>	<b>0</b>	<b>0</b>	<b>3,556,448</b>	<b>0.0</b>
<i>Total BlackRock Separate Account</i>	<i>3,023,642</i>	<i>984,381</i>	<i>0</i>	<i>0</i>	<i>42,998</i>	<i>0</i>	<i>42,997</i>	<i>4,094,017</i>	<i>0.0</i>
<b>Total Core Portfolio</b>	<b>680,357,894</b>	<b>17,552,746</b>	<b>7,131,923</b>	<b>31,000,000</b>	<b>7,033,499</b>	<b>2,083,740</b>	<b>6,972,879</b>	<b>671,701,355</b>	<b>30.9</b>
<b>Value Added Portfolio</b>									
Allegis Value Trust	922,378	0	0	750,000	10,483	786	345	182,420	0.0
Asana Partners Fund II	-121,791	656,250	0	0	-99,618	109,375	51,424	376,890	0.0
DRC European Real Estate Debt Fund II	8,610,202	0	0	0	24,422	20,649	-274,927	8,339,049	43.7
ECE European Prime Shopping Centre Fund II	28,167,702	0	90,294	77,973	739,193	148,261	-630,613	27,959,754	55.4
Hammes Partners II	16,344,662	826,124	359,069	6,052	318,819	57,865	3,515,659	20,582,279	62.0
Hammes Partners III	1,545,552	0	67,267	24,523	36,069	116,719	71,759	1,444,872	92.1
NREP Nordic Strategies Fund	13,312,494	0	3,293,981	0	63,733	178,749	-206,484	9,697,014	38.5
NREP Nordic Strategies Fund II	31,722,440	0	0	0	32,970	186,842	-646,103	30,922,465	48.0
NREP Nordic Strategies Fund III	7,512,919	0	0	0	-43,875	259,748	-313,638	6,895,657	38.0
<b>Value Added Portfolio</b>	<b>108,016,558</b>	<b>1,482,374</b>	<b>3,810,611</b>	<b>858,548</b>	<b>1,082,196</b>	<b>1,078,994</b>	<b>1,567,422</b>	<b>106,400,400</b>	<b>55.1</b>
<b>Opportunistic Portfolio</b>									
BlackRock High Return Separate Account	-134,378	984,381	0	0	-35,767	0	42,997	857,233	0.0
Carlyle China Project Rome Co-Investment	32,272,930	0	0	0	33,021	100,822	-702,581	31,502,548	0.0
Carlyle China Realty	7,423,511	0	0	0	-3,250	37,808	-162,008	7,220,445	0.0
CIM Fund VIII	38,002,112	2,550,054	42,021	83,153	-6,616	108,561	-389,620	39,922,195	33.3
KKR Real Estate Partners Americas	8,877,761	91,932	564,076	1,429,575	570,954	-93,409	-646,919	6,993,486	64.0
Sculptor Real Estate Fund III	14,010,617	0	427,073	0	249,383	47,571	299,386	14,084,742	41.6
<b>Opportunistic Portfolio</b>	<b>100,452,553</b>	<b>3,626,367</b>	<b>1,033,170</b>	<b>1,512,728</b>	<b>807,725</b>	<b>201,353</b>	<b>-1,558,745</b>	<b>100,580,649</b>	<b>29.7</b>
<b>Total Non-Core Portfolio 1Q 2007 Forward</b>	<b>208,469,111</b>	<b>5,108,741</b>	<b>4,843,781</b>	<b>2,371,276</b>	<b>1,889,921</b>	<b>1,280,347</b>	<b>8,677</b>	<b>206,981,049</b>	<b>45.5</b>
<b>Total Private Portfolio</b>									
SCERS	888,827,005	22,661,487	11,975,704	33,371,276	8,923,420	3,364,087	6,981,556	878,682,404	35.0

Property Type Diversification (%)	Apartment	Office	Industrial	Retail	Hotel	Other
<b>Core Commingled Funds</b>						
Brookfield Premier Real Estate Partners	29.7	32.4	37.8	-	-	-
Jamestown Premier Property Fund	-	66.8	-	25.4	-	7.8
Lion Properties Fund	23.9	36.9	20.1	14.2	-	4.9
MetLife Core Property Fund	100.0	-	-	-	-	-
Prime Property Fund	25.2	31.9	20.8	12.4	-	9.8
Principal U.S. Property Account	17.9	38.9	22.5	15.0	-	5.6
Prologis European Logistics Fund	-	-	100.0	-	-	-
Prologis Targeted U.S. Logistics Fund	-	-	100.0	-	-	-
Townsend Real Estate Fund, L.P.	38.8	15.5	19.7	11.2	-	14.8
<b>Core Commingled Funds</b>	<b>29.0</b>	<b>22.4</b>	<b>36.0</b>	<b>7.6</b>	<b>-</b>	<b>5.1</b>
<b>Core Separate Accounts</b>						
BlackRock Core Separate Account	-	-	-	-	-	-
Cornerstone Separate Account	-	-	-	-	-	-
<b>Core Separate Accounts</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Total BlackRock Separate Account</i>	-	-	-	-	-	-
<b>Total Core Portfolio</b>	<b>28.5</b>	<b>21.7</b>	<b>37.6</b>	<b>7.3</b>	<b>-</b>	<b>4.9</b>
<b>Value Added Portfolio</b>						
Allegis Value Trust	-	-	-	-	-	-
Asana Partners Fund II	-	-	-	100.0	-	-
DRC European Real Estate Debt Fund II	-	41.6	-	58.4	-	-
ECE European Prime Shopping Centre Fund II	-	-	-	100.0	-	-
Hammes Partners II	-	-	-	-	-	100.0
Hammes Partners III	-	-	-	-	-	100.0
NREP Nordic Strategies Fund	84.4	-	-	15.6	-	-
NREP Nordic Strategies Fund II	20.2	6.2	47.9	6.3	-	19.5
NREP Nordic Strategies Fund III	14.8	7.1	30.4	11.3	-	36.5
<b>Value Added Portfolio</b>	<b>14.5</b>	<b>5.5</b>	<b>15.9</b>	<b>35.2</b>	<b>-</b>	<b>28.7</b>
<b>Opportunistic Portfolio</b>						
BlackRock High Return Separate Account	-	-	-	-	-	-
Carlyle China Project Rome Co-Investment	-	-	100.0	-	-	-
Carlyle China Realty	-	-	100.0	-	-	-
CIM Fund VIII	50.5	22.7	1.2	12.3	4.6	8.7
KKR Real Estate Partners Americas	31.7	11.4	-	8.4	30.9	17.6
Sculptor Real Estate Fund III	7.2	3.3	2.8	3.9	4.6	78.2
<b>Opportunistic Portfolio</b>	<b>23.4</b>	<b>10.4</b>	<b>39.7</b>	<b>6.1</b>	<b>4.7</b>	<b>15.8</b>
<b>Total Non-Core Portfolio</b>	<b>18.8</b>	<b>7.9</b>	<b>27.4</b>	<b>21.1</b>	<b>2.3</b>	<b>22.5</b>
<b>Total Private Portfolio</b>						
<b>SCERS</b>	<b>26.6</b>	<b>18.9</b>	<b>34.0</b>	<b>10.8</b>	<b>0.5</b>	<b>9.2</b>
<b>Indices</b>						
<b>NFI-ODCE</b>	<b>25.3</b>	<b>33.8</b>	<b>19.3</b>	<b>17.1</b>	<b>0.2</b>	<b>4.1</b>



Geographic Diversification (%)	North East	Mid East	East North Central	West North Central	South East	South West	Mountain	Pacific	Ex-US
<b>Core Commingled Funds</b>									
Brookfield Premier Real Estate Partners	22.8	11.1	7.0	8.3	3.1	-	5.2	42.5	-
Jamestown Premier Property Fund	30.4	30.6	-	-	4.6	-	-	34.4	-
Lion Properties Fund	22.7	9.1	4.8	0.2	8.7	10.8	4.4	39.3	-
MetLife Core Property Fund	-	-	100.0	-	-	-	-	-	-
Prime Property Fund	23.0	7.3	8.6	1.6	12.8	8.2	5.1	33.5	-
Principal U.S. Property Account	17.4	8.8	2.6	1.2	8.8	14.1	11.4	35.6	-
Prologis European Logistics Fund	-	-	-	-	-	-	-	-	100.0
Prologis Targeted U.S. Logistics Fund	12.2	4.1	11.4	-	10.3	12.1	4.5	45.3	-
Townsend Real Estate Fund, L.P.	15.0	9.5	21.6	11.4	10.5	5.0	4.6	22.3	-
<b>Core Commingled Funds</b>	<b>16.1</b>	<b>7.7</b>	<b>17.5</b>	<b>3.6</b>	<b>7.1</b>	<b>6.1</b>	<b>4.3</b>	<b>29.8</b>	<b>7.9</b>
<b>Core Separate Accounts</b>									
BlackRock Core Separate Account	-	-	-	-	-	-	-	-	-
Cornerstone Separate Account	-	-	-	-	-	-	-	-	-
<b>Core Separate Accounts</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Total BlackRock Separate Account</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<b>Total Core Portfolio</b>	<b>15.9</b>	<b>7.5</b>	<b>16.7</b>	<b>2.1</b>	<b>7.6</b>	<b>7.3</b>	<b>4.2</b>	<b>29.6</b>	<b>9.0</b>
<b>Value Added Portfolio</b>									
Allegis Value Trust	-	-	-	-	-	-	-	-	-
Asana Partners Fund II	32.5	27.9	-	-	-	-	2.4	37.3	-
DRC European Real Estate Debt Fund II	-	-	-	-	-	-	-	-	100.0
ECE European Prime Shopping Centre Fund II	-	-	-	-	-	-	-	-	100.0
Hammes Partners II	30.3	5.9	25.7	2.1	3.2	21.8	6.8	4.1	-
Hammes Partners III	25.3	10.4	15.3	-	20.9	16.6	11.5	-	-
NREP Nordic Strategies Fund	-	-	-	-	-	-	-	-	100.0
NREP Nordic Strategies Fund II	-	-	-	-	-	-	-	-	100.0
NREP Nordic Strategies Fund III	-	-	-	-	-	-	-	-	100.0
<b>Value Added Portfolio</b>	<b>6.3</b>	<b>1.4</b>	<b>5.2</b>	<b>0.4</b>	<b>0.9</b>	<b>4.5</b>	<b>1.5</b>	<b>0.9</b>	<b>78.9</b>
<b>Opportunistic Portfolio</b>									
BlackRock High Return Separate Account	-	-	-	-	-	-	-	-	-
Carlyle China Project Rome Co-Investment	-	-	-	-	-	-	-	-	100.0
Carlyle China Realty	-	-	-	-	-	-	-	-	100.0
CIM Fund VIII	35.5	0.8	12.8	-	0.8	1.4	7.5	37.8	3.4
KKR Real Estate Partners Americas	9.0	-	15.2	41.3	0.6	0.3	-	16.4	17.2
Sculptor Real Estate Fund III	13.6	2.9	2.4	0.5	6.2	5.7	5.2	33.4	30.1
<b>Opportunistic Portfolio</b>	<b>16.8</b>	<b>0.7</b>	<b>6.5</b>	<b>3.0</b>	<b>1.2</b>	<b>1.4</b>	<b>3.7</b>	<b>21.0</b>	<b>45.7</b>
<b>Total Non-Core Portfolio</b>	<b>11.4</b>	<b>1.1</b>	<b>5.8</b>	<b>1.6</b>	<b>1.1</b>	<b>3.0</b>	<b>2.6</b>	<b>10.7</b>	<b>62.8</b>
<b>Total Private Portfolio</b>									
<b>SCERS</b>	<b>15.0</b>	<b>6.2</b>	<b>14.7</b>	<b>3.1</b>	<b>5.7</b>	<b>5.4</b>	<b>3.9</b>	<b>25.3</b>	<b>20.8</b>
<b>Indices</b>									
<b>NFI-ODCE</b>	<b>22.5</b>	<b>8.3</b>	<b>7.3</b>	<b>1.2</b>	<b>9.7</b>	<b>9.3</b>	<b>5.5</b>	<b>36.1</b>	<b>-</b>

## Advisory Disclosures and Definitions

### Disclosure

Trade Secret and Confidential.

Past performance is not indicative of future results.

Investing involves risk, including the possible loss of principal.

Returns are presented on a time weighted basis and shown both gross and net of underlying third party fees and expenses and may include income, appreciation and/or other earnings. In addition, investment level Net IRR's and equity multiples are reported.

The Townsend Group, on behalf of its client base, collects quarterly limited partner/client level performance data based upon inputs from the underlying investment managers. Data collection is for purposes of calculating investment level performance as well as aggregating and reporting client level total portfolio performance. Quarterly limited partner/client level performance data is collected directly from the investment managers via a secure data collection site.

<sup>1</sup>In select instances where underlying investment managers have ceased reporting limited partner/client level performance data directly to The Townsend Group via a secure data collection site, The Townsend Group may choose to input performance data on behalf of its client based upon the investment managers quarterly capital account statements which are supplied to The Townsend Group and the client alike.

### Benchmarks

The potential universe of available real asset benchmarks are infinite. Any one benchmark, or combination thereof, may be utilized on a gross or net of fees basis with or without basis point premiums attached. These benchmarks may also utilize a blended composition with varying weighting methodologies, including market weighted and static weighted approaches.

## Exhibit B: Real Estate Market Update 3Q19



# United States Real Estate Market Update (3Q19)

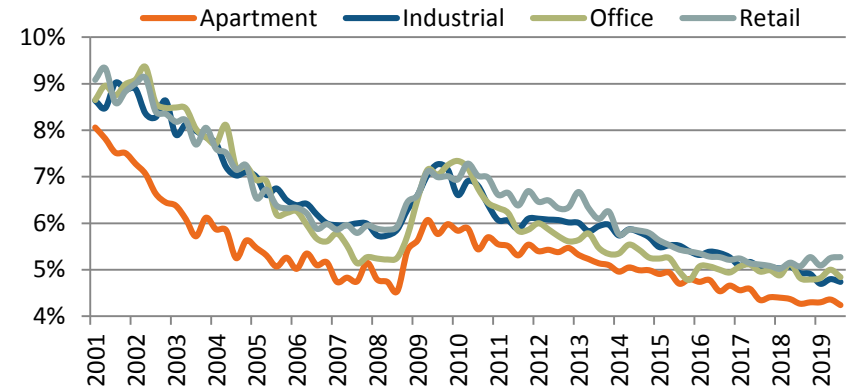
## General

- The S&P 500 produced a gross total return of 1.7% during the quarter. The MSCI US REIT index produced a return of 7.7%. Consumer Sentiment declined to 93.2, but rebounded subsequent to quarter-end.
- Macro indicators for U.S. real estate continue to be positive; GDP grew at an annualized rate of 2.1% in the third quarter and headline CPI rose by 1.7% YoY, below the Fed's 2% target. As of quarter-end, the economy has now experienced 108 consecutive months of job growth. The Federal Reserve has cut rates three times this year, including one cut following quarter end, and the current effective rate is 1.55%.

## Commercial Real Estate

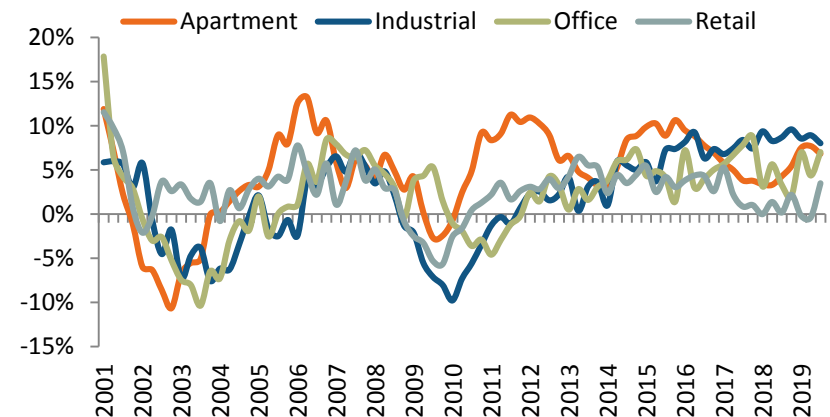
- Private real estate market carrying values remained flat over the quarter. Transaction cap rates (5.4%) expanded 4 bps during the quarter, while current valuation cap rates compressed across property sectors, apartments (-12 bps), industrial (-6 bps), office (-16 bps) . Retail cap rates were flat during the quarter.
- NOI growth picked up across property sectors during the quarter, with the industrial sector continuing to outpace the other traditional property types. While the industrial sector has faced increasing supply, it continues to benefit from outsized demand tailwinds (e-commerce and economic growth). Retail NOI growth rebounded to a positive 3.5% year over year.
- In the third quarter of 2019, \$46 bn of aggregate capital was raised by real estate funds. Through the third quarter of 2019, private equity real estate funds raised \$131 bn which is an increase of 16% YoY. However, transaction volume declined during the 3<sup>rd</sup> quarter by -4% year over year to \$154 bn.
- 10-year treasury bond yields dropped 34 bps to 1.7% during the quarter, and, subsequent to quarter-end, have rebounded to 1.8%. The U.S. yield curve is no longer inverted.

Current Value Cap Rates by Property Type



Source: NCREIF

4 Qtr Rolling NOI Growth



Source: NCREIF

# United States Property Matrix (3Q19)

## INDUSTRIAL

- In 3Q19, industrial properties were the highest returning sector at 3.2% and outperformed the NPI by 175 bps.
- Transaction volumes reached \$41.3 billion in the third quarter of the year, a 66.0% year-over-year increase. Individual asset sales were up 20.6% year-over-year, while portfolio purchases turned in a year-over-year volume increase of 597.2%. Portfolio transaction volume was driven by multiple megadeals occurring in the sector, as well as a significant year-over-year decrease in entity-level transactions. This large portfolio transaction volume increase is expected to be an outlier and should regress to the mean positive growth rate.
- The industrial sector continued to experience steady NOI growth of 8.0% over the past year, decreasing from the prior periods TTM growth of 8.9% in 2Q19. Market rent growth is expected to decelerate compared to the recent phenomenal pace, but still remains strong.
- Vacancy increased by 24 bps to 3.4%, still remaining close to all-time historic lows. E-commerce continues to drive demand.
- Industrial cap rates compressed approximately 19 bps from a year ago, to 4.74%. Industrial fundamentals still top all property sectors.

## MULTIFAMILY

- The apartment sector delivered a 1.2% return during the quarter, underperforming the NPI by 23 bps.
- Transaction volume in the third quarter of 2019 reached \$46.8 billion, an decrease of 5.6% year-over-year. This volume continues to make multifamily the most actively traded sector for the ninth straight quarter.
- Cap rates decreased to 4.2%, compressing 3 bps year-over-year. Robust job growth and improving wages have supported healthy operating fundamentals.
- Steady demand for the sector continues to keep occupancy above 94.2%, changes in vacancy remain flat from a year ago. The aging millennials have begun shifting their desires to suburban living but continued home price appreciation has deterred the full effect of this migratory trend.

## OFFICE

- The office sector returned 1.5% in 3Q19, 4 bps above the NPI return over the period.
- Transaction volumes decreased by 7.5% year-over-year in Q3. Annual sales volumes equaled \$32.3 billion for the quarter. Single asset transactions accounted for 83% of volume.
- Occupancy growth within the office sector has improved, increasing 1.1% year-over-year. Office continues to be the highest vacancy property type at close to 9.6%.
- NOI growth of 7.0% in the last year is a positive as the sector continues to benefit from positive job growth. Sun Belt and tech-oriented West Coast office fundamentals are healthiest.
- Office cap rates remained relatively flat from a year ago at approximately 4.8% in the third quarter. Office-using job growth is positive, though decelerating as expected.

## RETAIL

- As of 3Q19, the retail sector delivered a quarterly return of 0.2%, performing 119 bps below the NPI.
- Transaction volumes totaled \$15.0 billion in the third quarter, down 52.6% year-over-year.
- Cap rates have expanded approximately 20 bps within the sector over the last year. Strong fundamental headwinds continue to effect the retail landscape.
- NOI growth has turned a positive for the first time this year. NOI has increased 349 bps over the past year. Retail is expected to continue to suffer from the shift towards e-commerce.
- Retail vacancy rates increased 21 bps over the past year to 7.1%. Many big box stores have closed as the need for retail space shrinks, translating to a negative outlook for rent growth.

## Global Real Estate Market Update (3Q19)

- Global investment activity during the third quarter of 2019 was depressed relative to the same period in 2018. Year to date, the New York, San Francisco and Los Angeles metro markets have witnessed the greatest transaction volume.
- Broad geopolitical risk factors, such as Brexit and the Trade War, have negatively influenced sentiment. Fears of recession in the U.S. and an impending global slowdown also served to depress sentiment, in turn weighing on transaction volumes. Further monetary expansion has partially offset this trend, cushioning real estate yield spreads relative to sovereigns and supporting positive capital flows into the sector. Within the Eurozone, quantitative easing will provide stimulus to a flagging economy.

- Investment volumes in the Americas decreased during the third quarter year-over-year, including the U.S., Canada, and Mexico all showing declines, with Brazil increasing volume.
- Asia Pacific countries broadly declined, with Hong Kong volume decreasing significantly as a product of continued protests and political uncertainty within the metro. Australia was the sole country to post YoY transaction volume growth, although by a lackluster 1%.
- In EMEA, Brexit continued to press UK investment volumes lower, a 32% decline from third quarter 2018. Other EMEA markets saw similar declines – with France as a notable outlier – as trade tensions weigh on export reliant countries such as Germany.
- In the office sector, global leasing activity was healthy, leasing volumes decreased 3% YoY. The U.S office market was relatively strong, although leasing reached the lowest level since first quarter 2017. Europe experienced an uptick in demand, and office up-take increased 7% over the previous year. Central and Eastern Europe drove the trend, and experienced a 30% increase in activity.
- The retail sector continued to face headwinds globally as e-commerce disrupts traditional consumer spending habits. Within the U.S., net absorption dropped sharply, down 60% YoY. Surprisingly, mall vacancy held firm and rents rose moderately. Across Europe, rents moved downward, while APAC markets retail markets have remained largely neutral.
- The multifamily market in the U.S. has continued to see strong growth, with vacancy rates decreasing to a cycle low. Development continues, possibly presenting future supply headwinds. Rent control and other regulations hampered European markets, but investment volume remains positive. APAC markets were mixed, a result of macroeconomic uncertainty.
- Industrial properties continued their ascent, with robust uptake globally driven by logistics and omnichannel distribution demand. New supply has been increasing rapidly, and there are signs of slowing demand in Asia and Europe.

### Global Total Commercial Real Estate Volume - 2018 - 2019

\$ US Billions	Q3 2019	Q3 2018	% Change		YTD 2018	H1 2018	% Change YTD 19 - YTD 18
			Q3 19 – Q3 18	YTD 2018			
Americas	136	146	-7%	355	366	-3%	
EMEA	71	77	-9%	207	235	-12%	
Asia Pacific	166	209	-21%	609	635	-4%	
<b>Total</b>	<b>372</b>	<b>433</b>	<b>-14%</b>	<b>1172</b>	<b>1236</b>	<b>-5%</b>	

Source: Real Capital Analytics, Inc., Q3' 19

	2019	2020	2021
<b>Global</b>	<b>3.1</b>	<b>3.1</b>	<b>3.2</b>
<b>Asia Pacific</b>	<b>4.4</b>	<b>4.3</b>	<b>4.4</b>
Australia	1.8	2.4	2.5
China	6.1	5.9	5.7
India	6.0	5.6	6.4
Japan	0.9	0.3	0.8
<b>North America</b>	<b>2.1</b>	<b>1.7</b>	<b>1.9</b>
US	2.3	1.8	1.9
<b>EMEA</b>	<b>2.1</b>	<b>2.4</b>	<b>2.6</b>
<b>European Union</b>	<b>1.4</b>	<b>1.3</b>	<b>1.5</b>
France	1.3	1.2	1.3
Germany	0.5	0.7	1.2
UK	1.2	1.1	1.5

Source: Bloomberg (December 2, 2019)

Note: 2021 projections are not yet available for certain regions